

REMARKS

Applicant has reviewed and considered the Office Action mailed on October 31, 2008, and the references cited therewith. Claims 1, 6-8, 10, 11, 16, 19, and 20 are amended, claims 9, 17, and 18 are canceled, and no claims are added; as a result, claims 1-8, 10-16, and 19-23 are now pending in this application.

35 USC §102 Rejection of the Claims

Claims 1-9 and 11-18 were rejected under 35 USC § 102(b) as being anticipated by Partsch et al. (U.S. Publication No. 2003/0012322). Claims 9, 17, and 18 have been canceled. Claim 20 was rejected under 35 USC § 102(e) as being anticipated by Knight (U.S. Publication No. 2007/0105495).

Independent Claim 1

Claim 1 has been amended to include additional limitations. For example, claim 1 now recites “a slave circuit ... to produce a first clock signal ... and a second clock signal” corresponding to slave DL 222 and PIs 224 and 226 in Figure 2 of the application as filed. Also for example, claim 1 now recites “an output multiplexer having control inputs coupled to be responsive to the first and second clock signals, and having data inputs coupled to receive four separate phases of data signals” corresponding to output multiplexer 260 in Figure 2 of the application as filed. Applicants respectfully submit that Partsch does not disclose, teach, or suggest these limitations. Partsch does disclose a multiplexer (220, FIG. 1, 2), however, the multiplexer of Partsch is not in a data path as recited in claim 1, as amended. Rather, the multiplexer of Partsch is configured to select two clock phases (E, L) based on a control input (CTRL). Accordingly, applicants believe the rejection of claim 1 has been overcome by amendment, and is now in condition for allowance.

Dependent Claims 2-8

Claims 2-8 depend from claim 1 and recite additional limitations. Applicants respectfully submit claims 2-8 are in condition for allowance at least by virtue of dependency.

Independent Claim 11

Claim 11 has been amended to include additional limitations. For example, claim 11 now recites “data output circuitry including an output multiplexer coupled to drive the data output pad, the multiplexer having a control input coupled to receive a clock signal related to the output clock” corresponding to output multiplexer 260 in Figure 2 of the application as filed.

Applicants respectfully submit that Partsch does not disclose, teach, or suggest these limitations. Partsch does disclose a multiplexer (220, FIG. 1, 2), however, the multiplexer of Partsch is not in a data path as recited in claim 11, as amended. Rather, the multiplexer of Partsch is configured to select two clock phases (E, L) based on a control input (CTRL). Accordingly, applicants believe the rejection of claim 11 has been overcome by amendment, and is now in condition for allowance.

Dependent Claims 12-15

Claims 12-15 depend from claim 11 and recite additional limitations. Applicants respectfully submit claims 12-15 are in condition for allowance at least by virtue of dependency.

Independent Claim 16

Claim 16 has been amended to include additional limitations. For example, claim 16 now recites “interpolating between phases to produce at least one clock signal to time data off the integrated circuit, wherein the at least one clock signal comprises two clock signals to time data off the integrated circuit at four times the rate of the output clock signal” corresponding to the operation of output multiplexer 260 in Figure 2 of the application as filed. Applicants respectfully submit that Partsch does not disclose, teach, or suggest these limitations. Partsch does disclose a multiplexer (220, FIG. 1, 2), however, the multiplexer of Partsch is not in a data path as recited in claim 11, as amended. Rather, the multiplexer of Partsch is configured to select two clock phases (E, L) based on a control input (CTRL). Accordingly, applicants believe the rejection of claim 16 has been overcome by amendment, and is now in condition for allowance.

Dependent Claim 19

Claim 19 depends from claim 16 and recites additional limitations. Applicants respectfully submit claim 16 is in condition for allowance at least by virtue of dependency.

Independent Claim 20

Claim 20 has been amended to include additional limitations. For example, claim 20 now recites “a slave circuit responsive to the loop circuit to produce a first clock signal having a phase substantially equal to the output clock signal and a second clock signal having a phase offset substantially 90 degrees from the first clock signal, and an output multiplexer having control inputs coupled to be responsive to the first and second clock signals, and having data inputs coupled to receive four separate phases of data signals” similar to claim 1. Applicants respectfully submit that Knight does not disclose, teach, or suggest these limitations. Accordingly, applicants believe the rejection of claim 20 has been overcome by amendment, and is now in condition for allowance.

35 USC §103 Rejection of the Claims

Claims 21-23 were rejected under 35 USC § 103(a) as being unpatentable over Knight (U.S. Publication No. 2007/0105495) in view of Partsch et al. (U.S. Publication No. 2003/0012322).

Claims 10 and 19 were rejected under 35 USC § 103(a) as being unpatentable over Partsch et al. (U.S. Publication No. 2003/0012322) in view of Saeki (U.S. Publication No. 2003/0200518).

The rejections of claim 10, 19, and 21-23 under 35 USC § 103(a) rely on the rejections of claims 1, 11, 16, and 20 under 35 USC § 102. As discussed above, applicants believe the rejections of independent claims 1, 11, 16, and 20 have been overcome. Accordingly, applicants also believe the rejections of claims 10, 19, and 21-23 have also been overcome.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (952-473-8800) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-4238.

Respectfully submitted,

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